

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Hewlett Industries Inc

Mississippi Technology Alliance

Innovative Approach to Product Development Yields Tremendous Results

Client Profile:

Hewlett Industries is a major manufacturer of plastic spools used in the wire and cable industry. The company has been in operation since 1981 and employs 60 people in Starkville and Louisville, Mississippi.

Situation:

Hewlett's competitors in the business have recently entered the market with spools that are lighter and cheaper than currently manufactured by Hewlett. This competition has led to a short term decline in Hewlett's market share. In order to regain market share and sustain past growth, the new product needed to be in production by August of 2004.

Solution:

In April 2004, Hewlett's VP Tony Carr contacted Dr. John Berry, a Mechanical Engineering faculty member at Mississippi State University, for design assistance to produce a plastic injection molded spool that was lighter, cheaper to produce, and as strong as the current product. Dr. Berry, who is affiliated with Mississippi State University's Center for Advanced Vehicular Systems (CAVS), contacted Ben Dawsey, Field Engineer with CAVS-Extension, a strategic partner within the Mississippi Technology Alliance, a NIST MEP network affiliate, who set up a student competition to redesign the part. Hewlett Industries along with Tony Jeff, director of the Mississippi Technology Alliance, each offered \$250 (\$500 total) to the student with the best design. The students developed a 3-D model of the parts and performed Finite Element Analysis (FEA) of the new design that maintained the same strength characteristics while removing 40 percent of the material. Tony Carr, VP of Hewlett Industries, approved the design and had tooling made immediately to produce the new design. The newly designed part passed the required stress analysis tests and is on schedule to meet the customer deadlines for introduction to the market.

Results:

- * Designed and developed new plastic injection molded spool.
- * New product passed stress analysis tests and is on schedule for introduction to the market.

Testimonial:

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